EXHIBIT 6

Paper 11
Date: October 23, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

———————————

BEFORE THE PATENT TRIAL AND APPEAL BOARD

———————————

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS,
VERIZON CORP. SERVS. GRP. INC., T-MOBILE USA, INC.,
AT&T SERVS., INC., AT&T MOBILITY LLC, and AT&T CORP.,
Petitioner,

v.

HEADWATER PARTNERS I LLC,
Patent Owner.

———————————

IPR2024-00809
Patent 9,198,042 B2

———————————

Before HYUN J. JUNG, STEPHEN E. BELISLE, and RUSSELL E. CASS,
Administrative Patent Judges.

JUNG, *Administrative Patent Judge.*

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

IPR2024-00809
Patent 9,198,042 B2

I.   INTRODUCTION

A.   *Background and Summary*

Cellco Partnership d/b/a Verizon Wireless, Verizon Corp. Servs. Grp. Inc., T-Mobile USA, Inc., AT&T Servs., Inc., AT&T Mobility LLC, and AT&T Corp. (collectively, "Petitioner") filed a Petition (Paper 4, "Pet.") requesting institution of an *inter partes* review of claims 1–18 of U.S. Patent No. 9,198,042 B2 (Ex. 1001, "the '042 patent"). Headwater Partners I LLC ("Patent Owner") filed a Preliminary Response. Paper 8 ("Prelim. Resp."). With our authorization, Petitioner filed a Reply to the Preliminary Response directed only to our discretion under 35 U.S.C. § 314(a) (Paper 9, "Prelim. Reply"), and Patent Owner filed a Sur-reply (Paper 10, "Prelim. Sur-reply").

Under 35 U.S.C. § 314, an *inter partes* review may not be instituted "unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." Upon consideration of the Petition in view of the record at this stage and for the reasons explained below, we determine that Petitioner has shown a reasonable likelihood of prevailing with respect to at least one of the challenged claims.

Thus, we institute an *inter partes* review of claims 1–18 of the '042 patent on all presented challenges. 37 C.F.R. § 42.108(a) ("When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim."); *see also SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

B.   *Real Parties in Interest*

Petitioner identifies as real parties in interest Cellco Partnership d/b/a Verizon Wireless, Verizon Corp. Servs. Grp. Inc., T-Mobile USA, Inc.,

2

IPR2024-00809
Patent 9,198,042 B2

AT&T Servs., Inc., AT&T Mobility LLC, and AT&T Corp. Pet. 81.

Petitioner also names all current defendants in related litigation as potential

real parties in interest. *Id.* n.4. Patent Owner identifies itself as a real party

in interest. Paper 6, 1.

  C. *Related Matters*

      The parties identify *Headwater Research LLC v. Verizon Commc'ns*

Inc., 2:23-cv-00352-JRG-RSP (E.D. Tex.), *Headwater Research LLC v.*

AT&T Inc., 2:23-cv-00398-JRG-RSP (E.D. Tex.), and *Headwater Research*

LLC v. T-Mobile US, Inc., 2:23-cv-00379-JRG-RSP (E.D. Tex.) as related

matters. Pet. 82; Paper 6, 1.

  D. *The '042 Patent (Ex. 1001)*

      The '042 patent issued on November 24, 2015 from an application

filed on January 9, 2013 that is a continuation of two previously filed

applications, the earliest of which was filed on March 2, 2009. Ex. 1001,

codes (22), (45), (63), 1:7–16. The '042 patent also claims priority to

several provisional applications, the earliest of which was filed on January

28, 2009. *Id.* at code (60), 1:16–43.

      Figure 1 of the '042 patent is below reproduced.
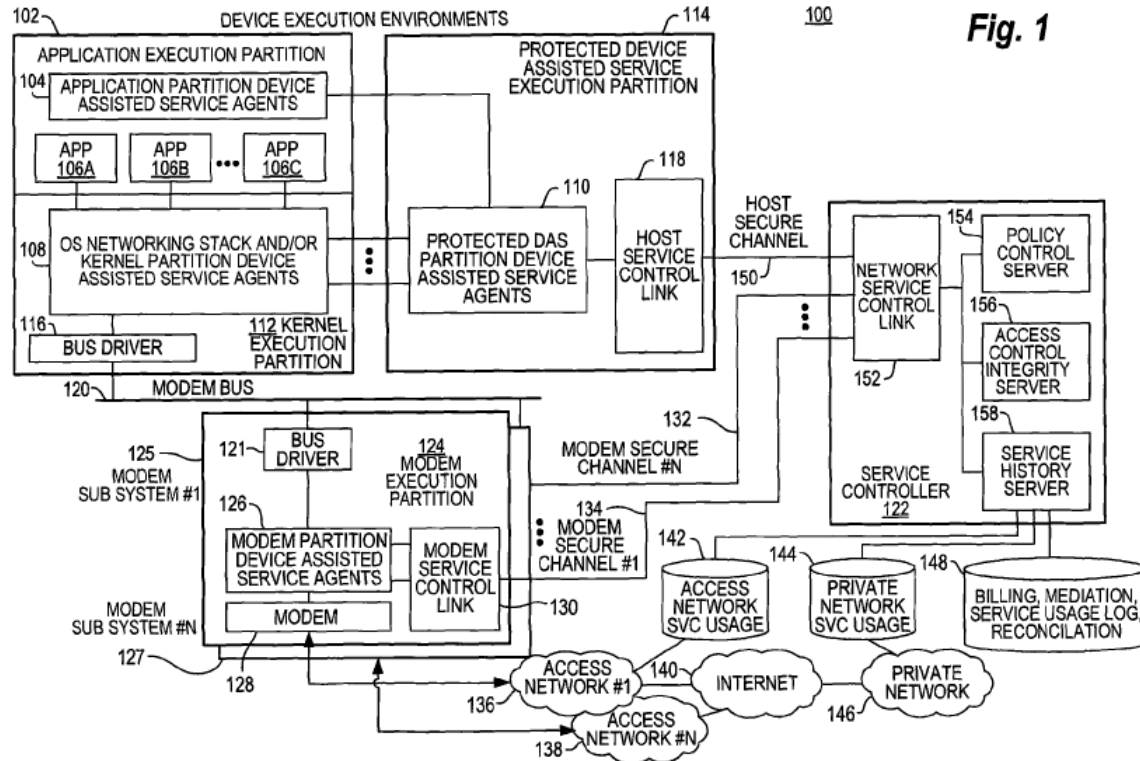
IPR2024-00809
Patent 9,198,042 B2

Fig. 1

Figure 1 shows "a secure execution environment for device assisted services." Ex. 1001, 2:10–11. "[T]he device execution environments include program/functional elements for," as an example, a "mobile communications device, such as a mobile phone" that uses modem subsystems 125, 127 to connect to access networks 136 and 138. *Id.* at 5:40–52.

Secure execution environment 100 has application execution partition 102, kernel execution partition 112, protected device assisted service ("DAS") execution partition 114, and modem execution partition 124. Ex. 1001, 5:54–65. Application programs execute in application execution partition 102, and low level drivers and OS programs execute in kernel execution partition 112. *Id.* at 5:54–58. DAS agents and functions execute in DAS execution partition 114, and modem program elements execute in modem execution partition 124. *Id.* at 5:58–65.

4

IPR2024-00809
Patent 9,198,042 B2

"[P]rotected DAS partition 114 can make it more difficult for a hacker, malware or system errors to compromise, attack or modify the device assisted service measurements, service policy implementation or service usage control operations on the device (e.g., communications device)." Ex. 1001, 6:32–37. "[S]ervice control link (e.g., host service control link 118 via host secure channel 150 to network service control link 152) is used for communication between the device assisted service agents and a service controller 122." *Id.* at 7:28–32.

Service controller 122 can include access control integrity server 156 and policy control server 154. Ex. 1001, 8:8–9, 8:26–27. "Access control integrity server 156 is used to compare various access control verification checks to ensure that the device assisted service agents have not been compromised." *Id.* at 8:8–11. "[P]olicy control server 154 stores policy settings for the various service plans that can be implemented on the device, and communicates the appropriate policy settings to the appropriate device DAS agents." *Id.* at 8:26–30. "[S]ervice controller 122 has secure access to service measures, service control settings, software images, software security state(s), and/or other settings/functions, for example, by virtue of the hardware enhanced execution partition and the secure channel into the protected DAS partition 114." *Id.* at 8:31–36.

E. *Illustrative Claim*

The '042 patent includes 18 claims, all of which Petitioner challenges. Claim 1, reproduced below, is the only independent claim.

> 1.   A method comprising:
> receiving, over a service control link, a report from a wireless end-user device, the report comprising information about a device service state;

5

IPR2024-00809
Patent 9,198,042 B2

> determining, based on the report, that a particular service policy setting of the wireless end-user device needs to be modified, the particular service policy setting being stored in a protected partition of the wireless end-user device, the protected partition configured to deter or prevent unauthorized modifications to the particular service policy setting, the particular service policy setting being associated with a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network, the particular service policy setting configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network; and
>
> is in response to determining that the particular service policy setting needs to be modified, sending configuration information to the wireless end-user device over the service control link, the configuration information configured to assist in modifying or allowing modifications to the particular service policy setting.

Ex. 1001, 19:22–45.

F. Asserted Prior Art and Proffered Testimonial Evidence

Petitioner identifies the following references as prior art in the asserted grounds of unpatentability:

Name	Reference	Exhibit
Wright	US 2004/0123153 A1, published June 24, 2004	1005
Limont	US 2007/0006289 A1, published Jan. 4, 2007	1004
Xu	US 2007/0061535 A1, published Mar. 15, 2007	1016
Polson	US 2007/0104169 A1, published May 10, 2007	1008

Petitioner contends that the above references are prior art under § 102(a), (b), (e), and (g).[1] Pet. 10–11. Petitioner also provides a Declaration of

---

[1] The relevant sections of the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112–29, 125 Stat. 284 (Sept. 16, 2011), took effect on March 16, 2013. Because the '042 patent issued from an application filed before that date, our citations to 35 U.S.C. §§ 102 and 103 in this Decision are to their

IPR2024-00809
Patent 9,198,042 B2

Henry Houh, Ph.D. (Ex. 1003). Patent Owner provides a Declaration of Erik

De La Iglesia (Ex. 2001).

G. Asserted Grounds

Petitioner asserts that claims 1–18 are unpatentable on the following

grounds:

Claims Challenged	35 U.S.C. §	References/Basis
1, 2, 6–18	103(a)	Limont, Wright, Xu
3–5	103(a)	Limont, Wright, Xu, Polson

Pet. 10.

II.   35 U.S.C. § 314(a)

Petitioner argues that factors 2–6 of *Apple Inc. v. Fintiv, Inc.*,

IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*")

weigh against exercising discretion to deny the Petition. Pet. 78–81; Prelim.

Reply 1–3. Patent Owner responds that each of the *Fintiv* factors favors

denial. Prelim. Resp. 10–22; Prelim. Sur-reply 1–3.

Fintiv instructs us to consider whether to deny institution in certain

circumstances when there is parallel district court litigation, upon

consideration of six factors:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;

> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;

> 3. investment in the parallel proceeding by the court and the parties;

---

pre-AIA versions. *See also* Pet. 7 (noting that "[t]he '042 Patent's application claims priority to various applications, the earliest of which was filed January 28, 2009").

IPR2024-00809
Patent 9,198,042 B2

4. overlap between issues raised in the petition and in the parallel proceeding;

5. whether the petitioner and the defendant in the parallel proceeding are the same party; and

6. other circumstances that impact the Board's exercise of discretion, including the merits.

Fintiv, Paper 11 at 6.

Our analysis of *Fintiv* is guided by the USPTO Director's Memorandum issued on June 21, 2022, titled "Interim Procedure for Discretionary Denials in AIA Post Grant Proceedings with Parallel District Court Litigation" ("Director's Memo"). We turn to the *Fintiv* factors.

A. Factor 1: Stay

According to the parties, the related litigation is not stayed. Pet. 79; Prelim. Resp. 11–13 (arguing also that a stay is unlikely to be granted); Prelim. Sur-reply 1; *see also* Ex. 3001 (notifying the Board that stays have been requested in all related proceedings).

Because the related litigation is not stayed and there is insufficient evidence that a stay may or may not be granted if trial is instituted, *Fintiv* factor 1 is neutral.

B. Factor 2: Proximity to Trial Date

The parties indicate that trial is set for May 19, 2025 and June 2, 2025 in related proceedings, and those dates are before the deadline for a final written decision in October 2025. Pet. 79 (arguing also that there are uncertainties in litigation scheduling); Prelim. Resp. 13–16 (arguing also that the scheduled trial date is consistent with time-to-trial statistics); *see also* Prelim. Reply 2–3 (arguing trial dates are very fluid); Prelim. Sur-reply 1, 3 (arguing that Petitioner is speculating the trial date may change).

IPR2024-00809
Patent 9,198,042 B2

Because the earliest trial date in the related litigation is set to start about five months before the due date for a final written decision in this proceeding, *Fintiv* factor 2 favors exercising our discretion to deny institution.

C. Factor 3: Investment in Parallel Proceeding

Petitioner argues that "co-pending litigation is in its early stages," claim construction briefing will not be completed until September 2024, a *Markman* hearing is scheduled for November 2024, fact discovery is set to close in December 2024, and expert discovery is set to close in February 2025. Pet. 79. Patent Owner argues that fact discovery and claim construction proceedings are well underway. Prelim. Resp. 16–17; Prelim. Sur-reply 1. Patent Owner also argues that Petitioner unduly delayed filing its petition. Prelim. Resp. 17–18.

The docket control orders of the related proceedings indicate that claim construction hearings are scheduled for November 2024, fact discovery is scheduled to be completed by December 2024, and expert discovery is to be completed by February 2025. Ex. 1022, 3–4; Ex. 2005, 3. Another related proceeding has due dates following about a month behind. Ex. 2003, 1–3.

Thus, the parties have expended significant effort on this case, but the claim construction hearing will not occur until after institution and it is not apparent that the district court has yet invested significant effort related to invalidity issues. As a result, *Fintiv* factor 3 is neutral.

D. Factor 4: Overlap with Parallel Proceeding

Petitioner stipulates that it "will not pursue invalidity challenges in this district court litigation on the grounds <u>or the prior art references asserted in the Petition</u>" to reduce or eliminate any risk of duplicative litigation.

9

IPR2024-00809
Patent 9,198,042 B2

Prelim. Reply 1; Ex. 1024; Ex. 1025; Ex. 1026; *see also* Pet. 78 (stipulating not to pursue in related litigation the grounds presented in this proceeding). Petitioner argues that there will be no overlap in evidence of invalidity between the present proceeding and related litigation. Prelim. Reply 1.

Patent Owner argues that Petitioner's stipulation is weak because it "does not quell concerns of overlap with parallel litigation" and "agree[s] to far less than the natural consequences of this IPR proceeding to a final written decision." Prelim. Sur-reply 1 (citing Prelim. Reply 1); *see also* Prelim. Resp. 20 (arguing similarly). Patent Owner also argues that Petitioner admitted that prior art relied upon in related litigation has similar disclosures as Limont. Prelim. Sur-reply 2 (citing Ex. 2018, 43–46; Ex. 2019, 67–70; Ex. 2020, 55–58).

Petitioner further argues that "there will not be complete overlap in the issues raised in the IPR and the Related Litigation" because the Petition challenges claims that are not at issue in the Litigation. Pet. 79. Specifically, according to Petitioner, claims 10, 11, and 15 are challenged in this proceeding but not in the related litigation. *Id.* at 79–80. Petitioner also argues that, in the related litigation, Patent Owner asserted over 300 claims from four patents, but the court will only allow five claims per patent to be challenged at trial. *Id.* at 80. Petitioner, thus, argues that "it is highly unlikely the district court addresses the validity of even all 15 asserted claims of the '042 [patent]." *Id.*

Patent Owner argues that Petitioner "challenges all of the claims that are currently asserted in the litigation." Prelim. Resp. 18 (citing Pet. 14; Ex. 1017; Ex. 1021, 2). Patent Owner also argues that the three additional claims challenged here do not make a meaningful difference. *Id.* at 19–20.

IPR2024-00809
Patent 9,198,042 B2

Petitioner replies that Patent Owner has reduced in related litigation its infringement contentions to only seven claims and is obligated to reduced it further to five claims before trial. Prelim. Reply 1–2 (citing PO Resp. 18; Ex. 1027). Patent Owner replies that the common and necessary streamlining in related litigation still does not make a meaningful difference. Prelim. Sur-reply 2.

Based on Petitioner's stipulation (Prelim. Reply 1; Ex. 1024; Ex. 1025; Ex. 1026), we determine there is very minimal overlap between issues raised in the Petition and in the parallel proceedings. Moreover, this proceeding will address all claims of the '042 patent.

Fintiv factor 4, therefore, weighs strongly against exercising our discretion to deny institution.

E. Factor 5: Whether Petitioner and Defendant are the Same Party

The parties agree that Petitioner includes defendants in the parallel litigation. Pet. 80 (arguing also the factor should be neutral); Prelim. Resp. 21; Prelim. Sur-reply 1.

Because Petitioner and defendants in the related litigation are the same, *Fintiv* factor 5 favors exercising our discretion to deny institution.

F. Factor 6: Merits and Other Considerations

Petitioner argues that "the merits of the Petition are particularly strong and the claims did not receive any analysis during prosecution." Pet. 80; *see also* Pet. 7 (noting that "[c]laims 1–18 received a first Office Action allowance with no prior art applied") (citing Ex. 1002, 48); Prelim. Reply 3 (noting "the lack of prior art applied during prosecution"). Petitioner specifically argues that Limont addresses the same problem with the same solution as the '042 patent and discloses identical architecture and concepts as the '042 patent. Pet. 80.

11

IPR2024-00809
Patent 9,198,042 B2

Patent Owner argues that Petitioner fails to present compelling unpatentability challenges and that Petitioner delayed filing its petition. Prelim. Resp. 21–22.

As discussed below, we determine on the present record that Petitioner's proposed combination starting with Limont shows a reasonable likelihood of demonstrating that claim 1 is unpatentable. Petitioner's showing at this stage, even if it were not considered "compelling," indicates that another look at the claims of the '042 patent is warranted, because, as Petitioner argues, the proposed combination addresses the same problem with a similar solution, similar architecture, and similar concepts as the '042 patent. Pet. 11–77. Petitioner's references were also not cited during prosecution. Ex. 1001, code (56). As Petitioner points out, no references were applied to the claims during prosecution. Pet. 7; Ex. 1002, 48. Thus, we find that Petitioner's showing is stronger than the minimum showing necessary to meet the "reasonable likelihood" standard required for institution.

In sum, on the facts of this proceeding, *Fintiv* factor 6 weighs against exercising our discretion to deny institution.

As specified in the Director's Memo, "compelling, meritorious challenges will be allowed to proceed at the PTAB even where district court litigation is proceeding in parallel." Director's Memo 4. The Director's Memo does not require a Petitioner to establish compelling merits to avoid discretionary denial. Additionally, the Director clarified the Interim Procedure, stating that "[t]he Board should first assess *Fintiv* factors 1–5; if that analysis supports discretionary denial, the Board should engage the compelling merits question." *CommScope Techs. LLC v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 at 6 (PTAB Feb. 27, 2023) (precedential).

12

IPR2024-00809
Patent 9,198,042 B2

Here, we do not find that *Fintiv* factors 1–5 weigh in favor of discretionary denial. Additionally, after weighing *Fintiv* factors 1–6, we determine that, on balance, these factors do not favor exercising our discretion to deny institution. Therefore, under the circumstances of this case, there is no need to determine whether the Petition establishes compelling merits.

G. Conclusion on Fintiv Factors

Based on a holistic analysis of the *Fintiv* factors taking into consideration "whether efficiency and integrity of the system are best served by denying or instituting review" (*Fintiv*, Paper 11 at 6), we decline to exercise our discretion under 35 U.S.C. § 314(a) to deny institution of *inter partes* review.

III. ANALYSIS

A. Legal Standards

"In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent [claim] it challenges is unpatentable." *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016). This burden of persuasion never shifts to Patent Owner. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). The Board may authorize an *inter partes* review if we determine that the information presented in the Petition shows that there is a reasonable likelihood that Petitioner will prevail with respect to at least one of the claims challenged in the petition. 35 U.S.C. § 314(a).

Petitioner contends that the challenged claims of the '042 patent are unpatentable under § 103. Pet. 10. A claim is unpatentable under § 103 if the differences between the claimed subject matter and the prior art are such

13

IPR2024-00809
Patent 9,198,042 B2

that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.[2] *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). When evaluating a combination of teachings, we must also "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Whether a combination of elements produces a predictable result weighs in the ultimate determination of obviousness. *Id.* at 416–417.

B. *Level of Ordinary Skill in the Art*

Petitioner argues that a person of ordinary skill in the art "would have been familiar with the changing of configuration settings of end-user devices to control access of the device to network data services, and storing those configuration settings in a protected partition" and "would have gained this knowledge through a mixture of training and work experience, such as by having a Bachelor's degree in computer science and two years of experience." Pet. 7–8 (citing Ex. 1003 ¶¶ 41–43).

For purposes of its Preliminary Response, Patent Owner does not challenge Petitioner's proposed level of ordinary skill in the art. Prelim. Resp. 4 (quoting Pet. 7–8); Ex. 2001 ¶ 31.

---

[2] The record does not yet include any objective indicia of non-obviousness.

IPR2024-00809
Patent 9,198,042 B2

Based on the preliminary record, we adopt Petitioner's asserted level of ordinary skill to determine whether there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition.

C. Claim Construction

In an *inter partes* review, the claims are construed

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2021); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Petitioner proposes that claim terms be given their plain and ordinary meaning "because the prior art relied on in this Petition meets each claim term under any reasonable construction." Pet. 7. "For purposes of this preliminary response, Patent Owner agrees that no formal claim construction is necessary." Prelim. Resp. 4–5 (quoting Pet. 7); Ex. 2001 ¶ 32.

In its arguments against the challenges, Patent Owner contends that one of ordinary skill in the art would have understood "'network data service' is a service that provides network data," and that the intrinsic and extrinsic evidence supports its asserted plain and ordinary meaning. Prelim. Resp. 5–6 (citing Ex. 1001, 1:45–2:3; Ex. 2001 ¶¶ 29–30, 35, 40–41). Patent Owner also contends that "service policy settings" are related to plans that provide network data services, as disclosed by the '042 patent, and "not some service (like email) that may be accessed using, but does not itself

15

IPR2024-00809
Patent 9,198,042 B2

provide, network data service." *Id.* at 7–8 (citing Ex. 1001, 8:26–30, 11:66–12:7; Ex. 2001 ¶¶ 37, 38).

Patent Owner further contends that its infringement contentions are consistent with the understanding of "service policy settings" and the settings are not merely generic settings for accessing other services. Prelim. Resp. 8 (citing Ex. 2001 ¶ 42). Patent Owner additionally contends that, because Petitioner includes providers of "network data services," it should be "well aware of the distinction between general services provided over the Internet (e.g., email services or AI services like ChatGPT that can be accessed via the Internet) and 'network data services' which are services for provision of network data to a device." *Id.* at 8–9 (citing Ex. 2001 ¶ 43).

In Patent Owner's view, email and web site services would not meet the plain and ordinary meaning of "network data service," because "the '042 patent does not even ***mention*** email or web pages." Prelim. Resp. 9 (citing Ex. 2001 ¶ 43). Patent Owner also argues that email and web page servers verifying and updating configuration settings would not solve the problem addressed by the '042 patent—avoiding degradation of overall network service experience due to user capacity concerns. *Id.* at 9–10 (citing Ex. 2001 ¶¶ 28–30, 44). Patent Owner, thus, argues that "the '042 patent does not encompass servers providing email and web page services as within the claimed 'network data service.'" *Id.* at 10.

Based on Patent Owner's cited support from the Specification and declarant testimony that has not yet been challenged, we adopt Patent Owner's proposed plain and ordinary meaning of "network data service" to mean "a service that provides network data." Prelim. Resp. 5; Ex. 1001, 1:48–49 ("many access networks such as wireless networks, cable networks and DSL (Digital Subscriber Line)"); Ex. 2001 ¶ 30. The parties should

16

IPR2024-00809
Patent 9,198,042 B2

consider further addressing Patent Owner's proposed interpretation during trial.

At this preliminary stage, we determine that express claim interpretation of any other term is not necessary to determine whether Petitioner shows a reasonable likelihood of prevailing. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.'") (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

D. Asserted Obviousness of Claim 1 Based on Limont, Wright, and Xu

1. Limont (Ex. 1004)

Limont is "directed towards methods . . . for enforcing device settings for mobile devices." Ex. 1004 ¶ 16. Figure 3 of Limont is below reproduced.
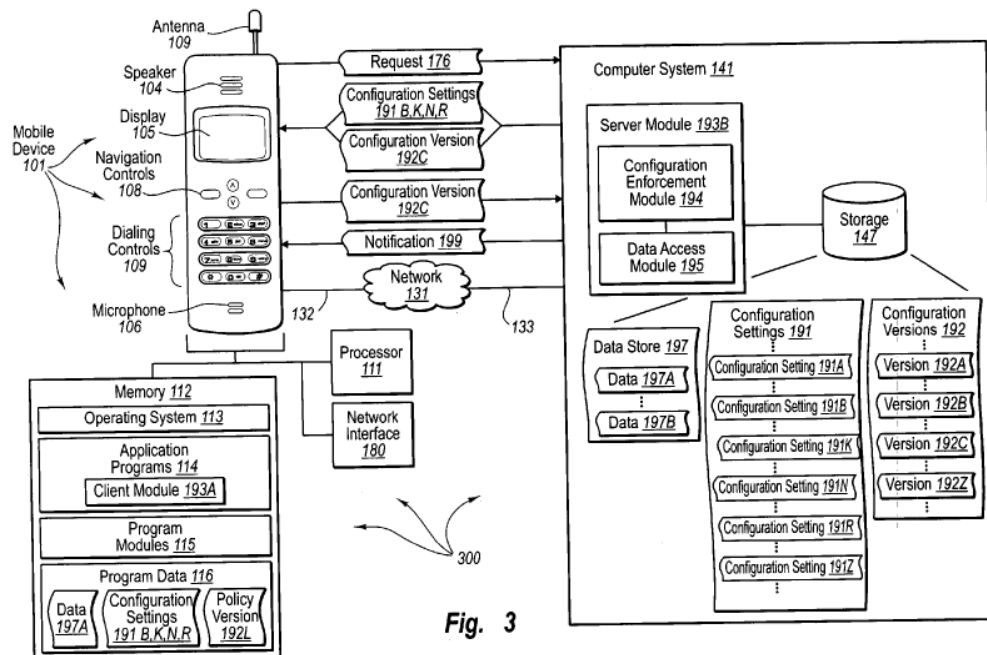

Fig. 3

Figure 3 shows a "computer architecture that facilitates enforcing configuration settings of mobile devices," such as computer architecture

17

IPR2024-00809
Patent 9,198,042 B2

300. Ex. 1004 ¶¶ 25, 72. "[M]obile device 101 includes client module 193A (e.g., a Web browser)" and "can utilize client module 193A to access data maintained by a server." *Id.*

"Computer system 141 includes server module 193B (e.g., a Web server)" that "includes policy enforcement module 194 and data access module 195." Ex. 1004 ¶ 73. Computer system 141 also includes configuration settings 191 that include policy setting 191A . . . 191Z. *Id.* "Configuration settings can include: operating system settings, application program settings, hardware settings, allocated resource settings, network interface settings, wireless protocol settings, etc." *Id.* Computer 141 further includes configuration versions 192A . . . 192Z. *Id.* ¶ 75.

"Server module 193B can interoperate with client side programs (e.g., client module 193A) to transfer data (e.g., Web pages) to a mobile device," and "in response to a mobile device data request, policy enforcement module 194 can determine if a requesting mobile device's policy settings are appropriate for accessing data." Ex. 1004 ¶ 77.

"Configuration enforcement module 193 can interoperate with one or more of an authentication module, authorization modules, and policy enforcement module of server module 193B (not shown) to reduce the likelihood of inappropriate data access." Ex. 1004 ¶ 78. "When configuration settings are appropriate (and, for example, a user is authenticated and authorized and policy settings are appropriate), data access module 195 accesses requested data and transfers requested data to the requesting mobile device." *Id.* "[W]hen configuration settings are inappropriate (and even if a user is authenticated and authorized and policy requirements are appropriate), configuration enforcement module 194 can

18

IPR2024-00809
Patent 9,198,042 B2

access appropriate configuration settings and transfer the appropriate configuration settings to the requesting mobile device." *Id.*

Limont also describes "method 400 for enforcing an appropriate mobile device configuration prior to permitting a mobile device to access maintained data." Ex. 1005 ¶¶ 79–91, Fig. 4.

2. *Wright (Ex. 1005)*

Wright's "protection of data is administered through one or more security policies" that can "determin[e] accessibility of data for the mobile device," for example, "as required or recommended by a security policy." Ex. 1005 ¶ 14. The "security policy may not allow a particular network service or application or both to be used based upon either or both of a particular detected location or the activity status of a security feature." *Id.*

Wright describes "system 200 for administering protection of data accessible by a mobile device." Ex. 1005 ¶ 47. System 200 can include authorization module 232, policy distribution module 234, policy management module 236, policy setting module 238, and policy enforcement module 244. *Id.* ¶¶ 47, 48, Fig. 2A. System 200 can protect data resident in the mobile device or "data 242 that is accessible by the mobile device over a network 204." *Id.* ¶ 47.

"[P]olicy distribution module 234 distributes security information to the one or more client mobile devices" and "has a communication interface or is communicatively coupled to the policy management module 236 for receiving notifications of updated security information." Ex. 1005 ¶ 51. "Examples of security information are versions of existing policies, policies, or software." *Id.* "[P]olicy management module 236 determines 309 whether the security information is to be encrypted." *Id.* ¶ 104.

19

IPR2024-00809
Patent 9,198,042 B2

Wright also describes "system 201 for protecting data accessible by a mobile device based on a location associated with a network environment in which the mobile device is operating." Ex. 1005 ¶ 58, Fig. 2B. System 201 "determin[es] and enforc[es] security policies based upon the activity status of a security feature in a communication session between the mobile device and another computer" and includes location detection module 208, policy setting module 212, security features determination module 210, policy enforcement control module 214, memory location(s) 216, authorization module 245, and client diagnostics module 246. *Id.*

3. *Xu (Ex. 1016)*

Xu's "processing unit with embedded system functions provides a secure base for enforcing security and/or operating policies" for "an electronic device such as a computer, cellular telephone, personal digital assistant, media player, etc." Ex. 1016 ¶ 3. "The processing unit may include features and functional support found in most or all modern microprocessors and also support additional functions providing . . . secure storage." *Id.*

Xu describes that "secure memory 318 may store, in a tamper resistant manner, code and data related to the secure operation of the computer 302." Ex. 1016 ¶ 23, Fig. 3. "Data in the secure memory 318 may include . . . policy data 322 that may specify policy related operational directives such as metering, reporting, update requirements, etc." *Id.* ¶ 23. Cryptography function 334 may also be used. *Id.* ¶ 25. Xu further describes how computer 300 is configured according to policy data 322 and when non-compliance to a policy is discovered. *See id.* ¶¶ 29–32.

IPR2024-00809
Patent 9,198,042 B2

4.   Claim 1

Petitioner notes that it primarily relies on description related to the embodiment shown in Figures 3 and 4 of Limont, and that the description for Figures 1 and 2 "contain parallel invalidating disclosure" that are relied upon for corresponding disclosures. Pet. 26 (citing Ex. 1003 ¶¶ 304–307).

For "[a] method," Petitioner argues that Limont discloses "a method for enforcing an appropriate mobile device configuration prior to permitting a mobile device to access maintained data." Pet. 24–26 (citing Ex. 1003 ¶¶ 300–303; Ex. 1004, Figs. 1–4).

For "receiving, over a service control link, a report from a wireless end-user device, the report comprising information about a device service state," Petitioner argues that Limont teaches (1) computer system 141 receiving request 176 from mobile device 101, (2) request 176 including a configuration version representing a current configuration setting including "policy settings," (3) the configuration version or policy version teaching or suggesting "information about the device service state," and (4) communication links 132, 133 using wireless protocols thereby teaching or suggesting "a service control link." Pet. 26–27 (citing Ex. 1003 ¶¶ 309–341; Ex. 1004 ¶¶ 80–81, Fig. 4), 27–28 (citing Ex. 1003 ¶¶ 328–331; Ex. 1004 ¶¶ 47, 73), 28 (citing Ex. 1003 ¶¶ 332–341; Ex. 1004 ¶¶ 38, 43, 56, Figs. 1, 3).

Petitioner also argues that Limont's description of configuration settings and policy settings are consistent with the disclosure of "device service state includ[ing] current service usage policy settings, current DAS settings, device status information, application status information, or other state and/or settings information" in the '042 patent. Pet. 27 (citing Ex. 1001, 17:46–18:11; Ex. 1003 ¶¶ 315–327). Petitioner further points to

21

IPR2024-00809
Patent 9,198,042 B2

data command, data request 164, and policy version 118. *Id.* (citing
Ex. 1003 ¶¶ 314–327; Ex. 1004 ¶¶ 30, 55, 58, 59, 67–69).

For "determining, based on the report, that a particular service policy
setting of the wireless end-user device needs to be modified," Petitioner
argues that Limont discloses receiving a report indicating a mobile device
configuration and using the configuration to determine if the existing
policies need to be modified. Pet. 28–30 (citing Ex. 1003 ¶¶ 343–375;
Ex. 1004 ¶¶ 45–53, 60–65, 80–83, Fig. 2 (steps 202, 205), Fig. 4 (step 402)).
Petitioner also argues that Limont's mobile device seeks access to data on a
server that can only be accessed with appropriate configuration settings. *Id.*
at 30 (citing Ex. 1003 ¶¶ 354–360, 374; Ex. 1004 ¶¶ 60–64, 73, 79, 84–89,
Fig. 4 (step 405)). Petitioner further argues that Limont uses "configuration
setting" and "policy setting" interchangeably. *Id.* (citing Ex. 1003 ¶¶ 362–
369; Ex. 1004 ¶¶ 45, 55, 77–78, 83). Petitioner additionally argues that
Limont's configuration settings are sent from computer system 141. *Id.* at
30–31 (citing Ex. 1003 ¶¶ 370–374; Ex.1004 ¶¶ 65, 85, 89).

For "the particular service policy setting being stored in a protected
partition of the wireless end-user device, the protected partition configured
to deter or prevent unauthorized modifications to the particular service
policy setting," Petitioner argues that Limont's mobile device 101 includes
memory 112 for storing configuration settings 191B, K, N, R and
configuration version 192L but Limont does not teach that the configuration
settings are secure. Pet. 31–32 (citing Ex. 1003 ¶¶ 378–386; Ex. 1004 ¶¶ 86,
Figs. 1, 3).

According to Petitioner, Wright teaches encrypted security
information, such as policy, and permissions for policies. Pet. 32–33 (citing
Ex. 1003 ¶¶ 387–394; Ex. 1005 ¶¶ 14, 51, 61, 78–103, 262, 280–284).

IPR2024-00809
Patent 9,198,042 B2

Petitioner argues that Wright's teachings regarding policies generally correspond to Limont's policy disclosures. *Id.* at 33 (citing Ex. 1003 ¶¶ 395–398; Ex. 1005 ¶¶ 48, 180–184, Figs. 5B–5F). Petitioner also argues that Wright teaches a "protected partition." *Id.* at 34 (citing Ex. 1003 ¶¶ 395–410; Ex. 1005 ¶¶ 47, 58–60, 176–177, 280, Fig. 2B).

Petitioner preemptively argues that, if Patent Owner asserts that the "protected partition" requires more than storing data, then Wright's protected partition also encrypts and decrypts. Pet. 35–36 (citing Ex. 1003 ¶ 415; Ex. 1005 ¶¶ 47, 51, 62, 131, Figs. 2B, 3C). Petitioner also argues that Wright's protected partition prevents unauthorized users modifying policies stored in encrypted memory and, in view of Wright, Limont's data would likewise be protected. *Id.* at 36 (citing Ex. 1003 ¶¶ 416, 417; Ex. 1004 ¶ 71; Ex. 1005 ¶¶ 48, 78–104, 229–230, 259–264, 280–284).

Petitioner further argues that, to the extent "stored in a protected partition" requires a secure execution environment, as shown in Figure 4 of the '042 patent, then Xu teaches such an environment that Petitioner proposes to combine with Limont's memory 112 to execute Wright's encryption protections. Pet. 36–40 (citing Ex. 1001, Fig. 1; Ex. 1003 ¶¶ 418–440; Ex. 1016 ¶¶ 3, 23, 25, 29–32, Fig. 3, claim 9).

For "the particular service policy setting being associated with a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network," Petitioner argues that Limont's mobile device 101 wirelessly exchanges data and includes network interface 180 for receiving data from and transmitting data to external sources. Pet. 42 (citing Ex. 1003 ¶¶ 443–470; Ex. 1004 ¶ 41). Petitioner also argues that Limont teaches configuration versions and settings that

23

IPR2024-00809
Patent 9,198,042 B2

include settings for network interface and wireless protocol. *Id.* at 42–43 (citing Ex. 1003 ¶¶ 444–446; Ex. 1004 ¶¶ 43, 45–53, 56, 75, 87).

Petitioner further argues that Limont's data exchange and network interface and wireless protocol settings would have been understood to be "service policy settings that provides for access . . . to a network data service over a wireless access network." Pet. 43 (citing Ex. 1003 ¶¶ 447–451). According to Petitioner, "Limont describes several forms of specific services with distinct accessed data also corresponding to the '*network data service*,'" such as email and web servers. *Id.* (citing Ex. 1004 ¶¶ 38, 45, 73).

Petitioner also argues that Limont's policies allow for access by providing data on or from a server. Pet. 44 (citing Ex. 1003 ¶¶ 452–466). Petitioner further argues that Limont's policy enforcement module 194 determines if the policy settings of the mobile device are appropriate for accessing the data on the server. *Id.* (citing Ex. 1003 ¶¶ 467–469; Ex. 1004 ¶ 77).

For "the particular service policy setting configured to assist in controlling one or more communications associated with the wireless end-user device over the wireless access network," Petitioner contends with reference to previous arguments that Limont's server 142, 193 evaluates and modifies configuration or policy settings for accessing requested server data and different types of communications such as email and web service. Pet. 44–45 (citing Ex. 1003 ¶¶ 473–474, 452–466, 475). Petitioner also contends that Limont's configuration settings can alter network interface and wireless protocol settings and, thus, teaches "control[ling] one or more communications associated with the wireless end-user device over the wireless access network." *Id.* at 45 (citing Ex. 1003 ¶ 476; Ex. 1004 ¶¶ 73, 87).

IPR2024-00809
Patent 9,198,042 B2

Regarding "is in response to determining that the particular service policy setting needs to be modified, sending configuration information to the wireless end-user device over the service control link, the configuration information configured to assist in modifying or allowing modifications to the particular service policy setting," Petitioner argues with reference to previous arguments that Limont discloses determining that a service policy setting needs to be modified and sending modified settings to a mobile device for implementation. Pet. 45–46 (citing Ex. 1003 ¶¶ 479–486; Ex. 1004 ¶¶ 65, 66, 84–89, Figs. 1, 3, 4, claim 6).

> a)   *Petitioner's Asserted Reason for Modifying*

Petitioner argues that Limont, Wright, and Xu each "teach[es] the same subject of managing and updating secure data, including policies, wirelessly on mobile devices," and because of the similar identification of problems and proposed solutions, one of ordinary skill in the art would have been motivated to consider and combine their teachings. Pet. 19 (citing Ex. 1003 ¶¶ 264–267), 20 (citing Ex. 1003 ¶¶ 278–287; Ex. 1004 ¶ 13; Ex. 1005 ¶ 9). In Petitioner's view, the citing of Wright during prosecution of Limont supports that the ordinarily skilled artisan would have considered their teachings to be closely related. *Id.* at 19–20 (citing Ex. 1003 ¶¶ 268– 277; Ex. 1013, 140–141, 145–148, 229–230).

Petitioner contends that one of ordinary skill in the art would have recognized from the references that policy information needs to be protected during transmission and that malicious users should be prevented from accessing critical data on mobile devices. Pet. 20–21 (citing Ex. 1003 ¶¶ 283–287). According to Petitioner, "Limont does not expressly provide protection for data on the device" but "Wright provides the complementary solutions of encrypting data." Pet. 21–22 (citing Ex. 1003 ¶¶ 283, 289–294;

IPR2024-00809
Patent 9,198,042 B2

Ex. 1004 ¶¶ 47–49); *see also id.* at 35 (arguing "Wright addresses the same issues identified by Limont" and "provides a solution for the problems identified in Limont") (citing Ex. 1003 ¶¶ 410–413; Ex. 1005 ¶¶ 14, 131–132, Figs. 2B, 3C).

Petitioner argues that one of ordinary skill in the art would have been "motivated to modify Limont's teachings of storing policy settings on the mobile device by encrypting the policy settings as taught by Wright" because a "malicious user" could access policies to allow access to data and prevent even an "authorized" user from changing policies. Pet. 22–23 (citing Ex. 1003 ¶¶ 293, 295). Petitioner also argues that using Wright in Limont would have been merely an application of a well-known operation on a known component for known and intended purposes. *Id.* at 23 (citing Ex. 1003 ¶¶ 296–297). Petitioner further argues that the ordinarily skilled artisan "would have been motivated to consider Xu's supplementary solution for the same reasons as discussed above for Wright." *Id.* (citing Ex. 1003 ¶¶ 165–222, 427–440). Petitioner additionally argues that it was known in the art to protect confidential data. *Id.* at 23–24 (citing Ex. 1003 ¶¶ 165–222); *see also id.* at 9–10 (contending protected partitions were known in the art at the time of invention).

In its mapping of the claim limitations to the references, Petitioner argues that one of ordinary skill in the art would have been "motivated to implement a secure environment as taught by Xu on Limont's mobile device incorporating Wright's encryption functionality" so as "to provide for the protection of data in mobile devices using techniques such as hardware protections and encryptions" and to address "'malicious users' accessing confidential information." Pet. 40–41 (citing Ex. 1003 ¶¶ 263–267, 379–286, 431–440; Ex. 1004 ¶ 13; Ex. 1016 ¶ 30). Petitioner also argues that one

26

IPR2024-00809
Patent 9,198,042 B2

of ordinary skill in the art would have been "motivated to modify Wright's encryption functionality using a secure environment as taught by Xu" because "the teachings of Xu beneficially increase Limont's and Wright's protections." *Id.* at 41 (citing Ex. 1003 ¶ 437; Ex. 1005 ¶¶ 78, 267; Ex. 1016 ¶¶ 25–26).

Petitioner further argues that one of ordinary skill in the art would have had a reasonable expectation of success in making the proposed combination. Pet. 19 (citing Ex. 1003 ¶¶ 165–222, 263–298, 427–440), 23 (citing Ex. 1003 ¶¶ 296–297; Ex. 1004 ¶¶ 9, 40, Fig. 1), 42 (citing Ex. 1003 ¶¶ 438–440).

b) *Patent Owner's Preliminary Response*

Patent Owner responds that Petitioner fails to show that Limont discloses a "service policy setting . . . associated with a service profile that provides for access by the wireless end-user device to a network data service over a wireless access network." Prelim. Resp. 5 (citing Pet. 42–44; Ex. 2001 ¶¶ 35–42). According to Patent Owner, one of ordinary skill in the art would have understood "'network data service' is a service that provides network data," its plain meaning supported by intrinsic and extrinsic evidence. *Id.* at 5–6 (citing Ex. 1001, 1:45–2:3; Ex. 2001 ¶¶ 29–30, 35, 40–41), 8–9 (citing Ex. 2001 ¶ 43).

Patent Owner, thus, argues that Petitioner's reliance on email and web site services fails to meet the plain and ordinary meaning of "network data services." Prelim. Resp. 9. Patent Owner also argues that email and web page servers "would not solve the same problem of alleviating user capacity concerns for an access network" that is addressed by the '042 patent. *Id.* at 9–10 (citing Ex. 1001, 1:45–2:3; Ex. 2001 ¶¶ 28–30, 44).

IPR2024-00809
Patent 9,198,042 B2

Patent Owner further argues that "service policy settings" are related to plans that provide network data services, as disclosed in the '042 patent, "are specific to the particular network data service provided by carriers," and "not some service (like email) that may be accessed using, but does not itself provide, network data service." Prelim. Resp. 7–8 (citing Ex. 1001, 8:26–30, 11:66–12:7; Ex. 2001 ¶¶ 37, 38).

c)   *Petitioner Shows a Reasonable Likelihood of Prevailing*

Based on the preliminary record, Petitioner shows a reasonable likelihood of prevailing in its challenge that Limont, Wright, and Xu teach, suggest, or would have been understood to disclose the limitations of claim 1 and that one of ordinary skill in the art would have combined those references in the manner asserted with a reasonable expectation of success.

Regarding "network data service," Petitioner points to Limont's teachings that (1) its "[m]obile device 101 can wirelessly exchange data" "using wireless protocols (e.g., GPRS, GSM, etc. to a mobile telephone server provider)," (2) mobile device 101 has network interface 180 "to receive data from external sources and/or transmit data to external sources," and (3) configuration settings for the mobile device includes "network interface and wireless protocol settings." Pet. 42–43; Ex. 1004 ¶¶ 41, 43, 87. Petitioner also cites paragraph 56 that states "[c]ommunication link 133 abstracts the actually physical representation of the connection from computer system 141 to network 131" that "can include wireless communication using wireless protocols." Pet. 43.

Petitioner, thus, contends that these teachings together would have been understood to disclose providing access "*to a network data service over a wireless access network* because the network interface controls the transmission/reception of data from the mobile device, and the wireless

28

IPR2024-00809
Patent 9,198,042 B2

protocol specifies the format of the data wireless transmitted over the wireless access network to the mobile device." Pet. 43 (citing Ex. 1003 ¶¶ 447–451). At this stage, these arguments and cited evidence sufficiently show Limont would have been understood to disclose accessing a network data service.

Petitioner goes on to argue that "Limont describes several forms of specific services with distinct accessed data also corresponding to the '*network data service*,'" such as an email server and web server. Pet. 43. According to Petitioner, these servers communicate with Limont's mobile device using wireless protocol "over network 131 (*access by the wireless end-user device to a network data service*)." *Id.* (citing Ex. 1004 ¶¶ 38, 45, 73). Petitioner's position appears to be that Limont's description of email and web servers show accessing a network data service because access to these "specific services" is "over network 131." *See id.*

At this stage, Petitioner presents sufficient argument and evidence that Limont teaches a "network data service" even under Patent Owner's proposed plain and ordinary meaning discussed above in Section III.C. Therefore, on the record before us, Petitioner shows a reasonable likelihood of prevailing on claim 1 as unpatentable over Limont, Wright, and Xu.

E.   *Remaining Challenges*

Claims 2 and 6–18 depend directly or indirectly from claim 1. Ex. 1001, 19:46–49, 20:13–49. Petitioner argues with citations to the record that Limont or Limont and Wright teach, suggest, or would have been understood to disclose the additional limitations of claims 2 and 6–18. Pet. 46–62.

Claims 3–5 recite "an intermediate network device." Ex. 1001, 19:50–20:12. Petitioner argues with citations to the record that adding

29

IPR2024-00809
Patent 9,198,042 B2

Polson to its proposed combination teaches or suggests the additional limitations of claims 3–5. Pet. 69–77. Petitioner also argues with support that one of ordinary skill in the art would have had reason to further combine with Polson and would have had a reasonable expectation of success in making that combination. *Id.* at 64–69.

Patent Owner does not provide arguments beyond those described above for claim 1. *See generally* Prelim. Resp. For the reasons above, we preliminarily determine that Petitioner demonstrates a reasonable likelihood of prevailing with respect to its challenge to independent claim 1. We, therefore, institute review on all challenged claims on all grounds set forth in the Petition. 37 C.F.R. § 42.108(a); *see also SAS*, 138 S. Ct. at 1354.

IV. CONCLUSION

After considering the evidence and arguments presented in the Petition and the cited evidence, we determine that Petitioner has demonstrated a reasonable likelihood of prevailing in proving that at least one of claims 1–18 of the '042 patent is unpatentable, and thus, we institute an *inter partes* review of all challenged claims on all presented challenges. 37 C.F.R. § 42.108(a).

At this stage of the proceeding, the Board has not made a final determination as to the patentability of any challenged claim or any underlying factual and legal issues.

IPR2024-00809
Patent 9,198,042 B2

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–18 of U.S. Patent No. 9,198,042 B2 is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 9,198,042 B2 shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

For PETITIONER:

Patrick D. McPherson
Kevin P. Anderson
DUANE MORRIS LLP
PDMcPherson@duanemorris.com
kpanderson@duanemorris.com

FOR PATENT OWNER:

Reza Mirzaie
Dale Chang
Amy E. Hayden
James A. Milkey
Neil Rubin
Philip X. Wang
RUSS, AUGUST & KABAT
rmirzaie@raklaw.com
dchang@raklaw.com
ahayden@raklaw.com
jmilkey@raklaw.com
nrubin@raklaw.com
pwang@raklaw.com
rak_headwater@raklaw.com

31